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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/377,740 08/20/99 SHOJI

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VENABLE
P O BOX
WASHINGTON DC 20043-9998

EXAMINER

CRANE, S

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 02/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/377,740

Applicant(s)

SHOJI ET AL.

Examiner

Sara W. Crane

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dangelo in view of Kean.

Figure 4 of Dangelo teaches an integrated circuit comprised of a plurality of functional blocks, labeled "core," and customer logic and uncommitted blocks. The customer logic and uncommitted areas can be gate arrays (column 5, lines 42-45). Kean column 13, line 33, is relied upon to show that gate arrays are made up of "basic cells." Kean figure 7 shows that the cells are arranged in lines. The Dangelo reference teaches that the "core" is predefined (column 5, line 45), and that the customer logic varies in design according to the desired end application (column 5, lines 39-45). Also, in the sentence bridging columns 5 and 6, the customer can modify the basic design in order to specify later generations of revisions. The designation "field programmable gate array" in column 5, line 44, also implies that the gate arrays comprising the customer logic are to be programmed in the field. It is clear in view of these teachings that the Dangelo gate array interconnections can be designed, and redesigned, after formation of the core areas, as in claim 6. These teachings also encompass each of the steps of claims 1 and 12.

With respect to claims 2-4, standard designs would have been obvious to reduce design effort, and custom designs would have been obvious where no standard designs exist. With respect to claim 5, figures 2 and 4 of Dangelo show interconnections between various blocks on the chip. With respect to claim 7, Dangelo figure 4 shows the layout of the functional blocks (core) and the gate arrays (customer and uncommitted). This layout includes a center position of the chip. With respect to claims 10-11, Dangelo teaches CPU and memory at column 3, lines 52-55.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as discussed above with respect to claims 6-7, and further in view of Kawashima.

As noted in the previous Office action, I/O buffers at the chip edges would have been obvious in view of the Kawashima cover figure, to achieve design flexibility as noted in the Kawashima abstract.

Conclusion

Applicant's remarks of Dec. 8, 2000 have been reviewed, but are largely moot in view of the new grounds of rejection. Applicant notes that the claims require function blocks with functions determined prior to placement on the chip, in combination with gate array blocks with functions determined after placement of the functional and gate array blocks. Although the Dangelo reference was cited above to show this feature, none of the claims seem to say anything about the function blocks having functions determined prior to placement on the chip. Note also with respect to the method claims

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that no order is recited for the method steps listed. With respect to the device claims, the claim is drawn to the device produced by the method recited, and not the method itself, and it is not clear that a gate array block having a circuit designed after placing of the functional blocks would have any structure that is necessarily different from a gate array block having a circuit designed at some other time. So the order of the design steps would not seem to impart patentability to these claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (703) 308-4894.

The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist, whose telephone number is

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(703) 308-0956.

A handwritten signature in black ink, reading "Sara W. Crane". The signature is written in a cursive style with a large, stylized 'S' and 'C'.

Sara W. Crane
Primary Examiner
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